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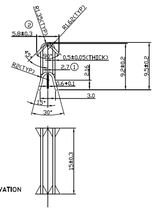
HOLDING FORCE TEST PROCEDURE

1.Take a 200mmX100mmX1.6mm Powder Coated Panel & cover its one end with rexine on both sides.

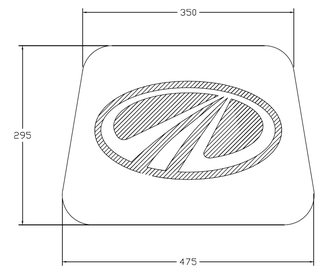
2.Now pass a copper wire through the Rexine clip & insert Rexine clip on the Rexine by hammering.

3.Now pull the Rexine clip out from the Panel & record the force at which the Rexine Clip comes out of the panel.

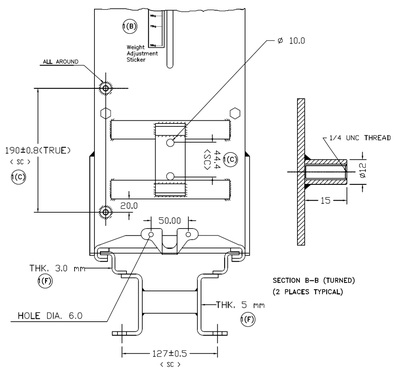
MTL : SPRING STEEL	GRADE : EN42J
TEMPERING : ON 15-N SCALE 77.7 (EQUIVALENT TO 35 HRC)	
HOLDING FORCE : 10 Kgf MIN.	
PART NAME : REXINE CLIP	
PART No. : BSM - 04 - BOP - 003	

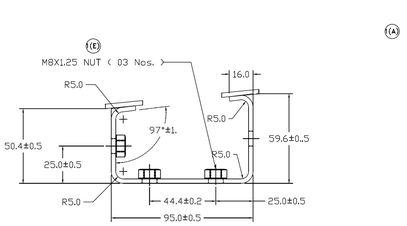


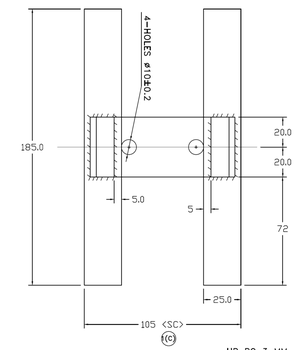
- SURFACE TREATMENT : ZINC PLATED WITH YELLOW PASSIVATION
- PLATING THICKNESS : 8 - 15 MICRONS



BACK REST





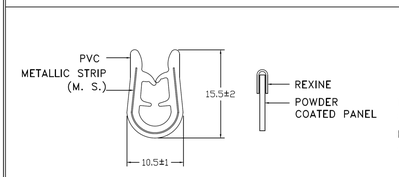


HR PO 3 MM
THICK IS: 1079

C BRACKET FOR EMBLEM & 7 POLE SOCKET

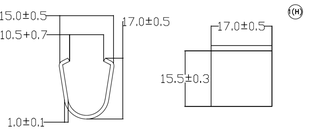
(1O)

SEAT COVER REXINE SPECIFICATION			
S. No.	DESCRIPTION	TEST METHOD	SPECIFICATION
1	TYPE OF COATING	–	SINGLE SIDE PVC
2	COLOUR	–	GREY-2
3	THICKNESS (mm)	FPS/TM/03	0.40 Min.
4	TOTAL WEIGHT (GSM)	FPS/TM/01	450 ± 50
5	BREAKING STRENGTH WARP (Kgf)	FPS/TM/04	25 Min.
6	BREAKING STRENGTH WEFT (Kgf)	FPS/TM/04	20 Min.
7	TEARING STRENGTH WARP (Kgf) (TONGUE TEAR / 2cm)	FPS/TM/08	1.2 Min.
8	TEARING STRENGTH WEFT (Kgf) (TONGUE TEAR / 2cm)	FPS/TM/08	1.0 Min.
9	ADHESUION OF COATING WARP (Kg / 2.5 cm)	FPS/TM/09	1.5 Min.
10	ADHESION OF COATING WEFT (Kg / 2.5 cm)	FPS/TM/09	1.5 Min.



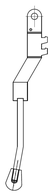
(1H)

PART NAME : BEADING
PART No. : DSM-04-BOP-001
MATERIAL : PVC + METAL STRIPS
HOLDING FORCE : 16 Kgf (Min) WHEN TESTED ON POWDER COATED PANEL WITH REXINE ON BOTH SIDES.
PANEL SIZE : 100mm X 75mm X 1.6mm
PANEL MATERIAL : M. S.



PART NAME : BEADING LOCK
PART No. : DSM-04-BOP-002
MATERIAL : M. S. QTY. : 02 Nos.
LOCATION : ONE AT EACH BEADING JOINT
* SURFACE TREATMENT : ZINC PLATED WITH BLACK PASSIVATION
* PLATING THICKNESS : 8 - 15 MICRONS

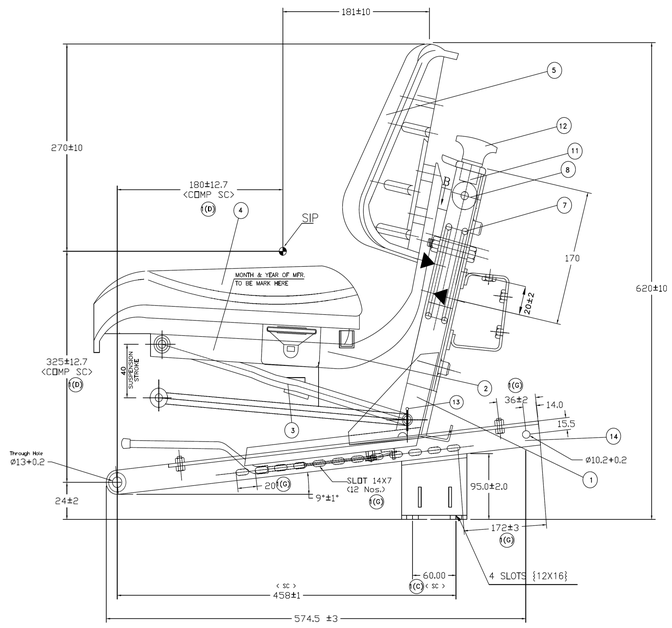
(1O)



LEVER ARM FOR SLIDER

SPECIFICATION FOR POWDER COATING QUALITY- 100% PURE POLYSTER POWDER COATING			
NO.	CHARACTERISTICS	UNITS	SPECIFICATION
1	COLOUR		BLACK
2	DFT	MICRON	40(MIN.)
3	MAR RESISTANCE		NAIL HARD ON CURING AND AFTER COMPLETE COOLING.NO PERMANENT SCRATCH MARKS ON A LIGHT FINGER NAIL MOVEMENT
4	ADHESION		NO LOSS OF ADHESION IN CROSS HATCH TEST.100/100 CROSS OUT CREEPAGE
5	SALT SPRAY RESISTANCE	HOURS	300 HOURS ON TEST PANEL.2MM

NOTE:-ALL THE TESTS TO BE CONDUCTED ONLY ON TEST PANEL.

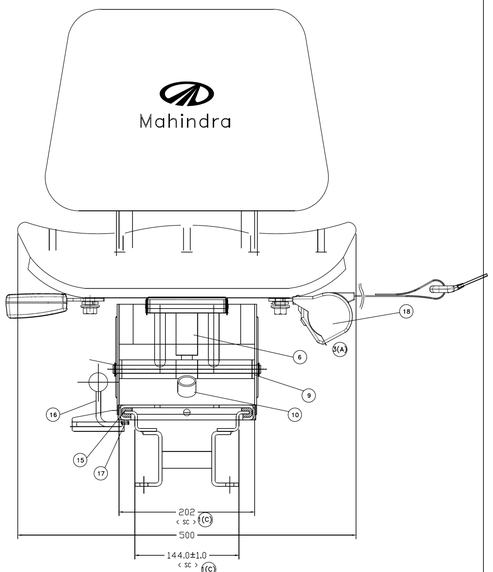


NOTES

1) GENERAL TOL ON FOAM +/- 10
2) GENERAL TOL ON SHEET METAL +/- 2
3) SEAT CUSHION HARDNESS : 22 +/- 2 Kgf
4) BACKREST CUSHION HARDNESS 15 +/- 2 Kgf
5) SURFACE TREATMENT OF METAL PARTS :
SHEET METAL PARTS TO BE POWDER COATED WITH BLACK COLOUR HAVING 40 MICRONS MIN. THICKNESS.
HARDWARE- ZINC FLAKE COATING (MAGNI 565), NO RUST ALLOWED WITHIN 500 HOURS. (AE)
6) THE DIMENSION SHOWN FOR SIP IS WHEN THE SEAT IS STATICALLY LOADED WITH 65 KG ON SEAT CUSHION AND 10 Kg ON BACKREST CUSHION AND SEAT BLOCKED AT MID-POINT OF SUSPENSION AND FORE AND AFT TRAVEL.
7) SIP LOCATION AS PER IS: 11113-1999 (2nd REVISION)
8) COLOUR OF REXINE BLACK- THICKNESS OF REXINE: 1.0 + 0.2
9) SEAT BASE CUSHION WIDTH-500 MM
10) WEIGHT ADJ CALIBRATION
10.1) SEAT LOADED WITH 50 Kg STATIC WEIGHT AND WITH THE SPRING TENSION KEPT TO THE MINIMUM INDICATIVE ARROWS HAVE BEEN MATCHED AS PER STD CALIBRATION METHODS
10.2) SEAT LOADED WITH 90 ± 5 KG AND SPRING TENSION ADJUSTED TO MATCH INDICATIVE ARROWS BEFORE DESPATCH
11) STROKE OF 40 mm IS TO BE MEASURED EITHER IN DYNAMIC CONDITION OR WITH A STATIC WEIGHT OF 90 Kg Min ON SEAT BASE CUSHION

NOTES ADDED

12)TESTING:-
12.1) VIBRATION TEST :- SEAT LOADED WITH 90 Kg. WEIGHT TO PASS TEST AT 2 Hz FOR 100,000 CYCLES.
12.2) SLIDER MECHANISM TEST : 18000 CYCLE - MINIMUM PASSING CYCLES WITH A LOAD OF 90 Kg.
12.3) IMPACT TEST :- 45 KG. WEIGHT TO BE APPLIED ON SEAT CUSHION AT 0.5 Mz. FOR 100,000 CYCLES.
12.4) DAMPER TEST :- ENDURANCE TEST 1000,000 CYCLES, DAMPING FORCE AS PER IS-5423-1989. MOUNTING EYE STRENGTH AS PER IS-12648-1989.
12.5) SEAT REXINE HEAT AGING AT 80 DEGREE CENTIGRADE FOR 24 HRS AS PER ASTM D-754 , COLD CRACK AT -5 DEGREE CENTIGRADE FOR 24 HRS. AS PER JISK - 6772
13) FRONT MOUNTING HOLE POSITION AND REAR HOLE MOUNTING POSITION SHOULD BE CO-AXIAL WITHIN 1 MM
14) SUSPENSION STROKE = VERTICAL - 40±2
15) FORE AND AFT - HORIZONTAL STROKE- 200 MM IN STEP OF 20 MM EACH
16) SEAT POSITION SHOWN IN THE DRG.IS WHEN THE SEAT IS AT THE NEAREST CENTRE OF ITS TRAVERSE AND CAN MOVE 100 MM IN FORWARD DIRECTION AND 100 MM IN BACKWARD DIRECTION
(1K) 17) SLIDER MECHANISM LATERAL PLAY 2.0 MM MAX.
(1L) 18) PULL FORCE FOR SLIDER - MAX. 10 Kgf.
A) FRONT TO REAR - MAX. 20 Kgf. WHEN SEAT IS UNLOADED & MAX. 50 Kgf. WHEN SEAT IS LOADED WITH 65 Kg. WEIGHT
B) REAR TO FRONT - MAX. 10 Kgf. WHEN SEAT IS UNLOADED & MAX. 10 Kgf. WHEN SEAT IS LOADED WITH 65 Kg. WEIGHT
19) SUPPLY CONDITION:- TWO NO. SEATS DULY PACKED IN CORROGATED BOX.
20) CO2 WELDING AS PER M&M STD. PS-608.
21) GREY REXINE COVER ON SEAT CUSHION & GREY REXINE COVER WITH LOGO ON BACK CUSHION. (COLOR LIGHT GREY CODE No. PF - 301)
22) NO SHARP EDGES & BURRES SHOULD BE PRESENT
23) SEAT TO BE DISPATCHED AT 90Kg RATING
(1W) 24) BEADING HOLDING FORCE 16 Kgf.MIN.
(1M) 25) BEADING LOCK TO BE PUT ON EACH IN SEAT CUSHION AND BACK CUSHION & CRIMPED
(1M) 26) 15 nos. REXINE CLIP TO BE PUT ON BACK CUSHION & 18 nos. REXINE CLIP TO BE ON SEAT CUSHION. REXINE CLIP SHOULD BE EQUISPACED WHEREVER POSSIBLE
(1N) 27) BEADING CRIMPING - BEADING ON BOTH SEAT CUSHION & BACK CUSHION TO BE CRIMPED BY CRIMPING TOOL
(1O) 28) FORE & AFT RELEASE LEVER OPERATING FORCE - MAX. 10 Kgf WHEN SEAT IS UNLOADED & MAX. 10 Kgf WHEN SEAT IS LOADED WITH 65 Kg. WEIGHT
(1P) 29) SEAT CUSHION THICKNESS - AVERAGE 50 mm SEAT CUSHION SURFACE HAS RECTANGULAR STRIPS WITH AIR CIRCULATING CHANNELS
(1P) 30) BACK CUSHION THICKNESS - AVERAGE 35 mm
(1Q) 31) KNOB OPERATING TORQUE - MAX. 12Nm WHEN SEAT IS UNLOADED & WHEN SEAT IS LOADED WITH 65 Kg. WEIGHT
(1R) 32) NO SHARP EDGES & BURRES SHOULD BE PRESENT
(1S) 33) SEAT TO BE DISPATCHED AT 90Kg RATING
(1A) 34) SEAT BELT MUST COMPLY TO SAEJ 2149



BILL OF MATERIAL

S.NO.	PART DESCRIPTION	NO OFF	DRG. NO.	M&M DRG. NO.
1	BASE ASSEMBLY	1	DSM-8K-10-01	
2	FLOATING FRAME	1	DSM-02	7600347R1
3	LINK ASSEMBLY	1	DSM-8K-10-03	
4	SEAT CUSHION	1	DSM-04-A	
5	BACK CUSHION	1	DSM-AU-08-05-A	
6	DAMPER (SHOCK ABSORBER)	1	DSM-BOP-02	7600351R1
7	SPRING	2	DSM-BOP-01	7600352R1
8	NYLON ROLLER	2	DSM-BOP-13	7600353R1
9	NYLON BUSH (LINK ASSEMBLY)	6	DSM-BOP-12	7600354R1
10	LOWER RUBBER STOPPER	1	DSM-BOP-11	7600356R1
11	UPPER RUBBER STOPPER	2	DSM-BOP-11	7600356R1
12	WEIGHT ADJUSTMENT KNOB	1	DSM-BOP-3	7600357R1
13	SPLIT PIN	4	DSM-BOP-17- A	7600358R1
14	SLIDER ASSEMBLY 'Z' SECTION	1	DSM-8K-10-14	
15	SLIDER GUIDE BUSH	4	DSM-BOP-AU-15	
16	LEVER ARM FOR SLIDER ASSEMBLY	1	DSM-8K-10-16	
17	LEVER ARM SPRING	1	DSM-BOP-8K-49	
18	SEAT BELT ASSY.	1 Set	DSM-BOP-8K-21	H07660437D91
(1A) 19	C BKT. FOR EMBLEM & 7 POLE SOCKET	1	DSM - 017	
(1J) 20	REXINE COVER FOR SEAT CUSHION	1	DSM-BOP-8K-18	
(1J) 21	REXINE COVER FOR BACK CUSHION	1	DSM-BOP-8K-18	

REV. NO.	A	ZINC PLATING CHANGED TO ZINC FLAKE PLATING (MAGNI 565) WITH SILVER GREY	SHRII	SHRII	ASR	31.07.2023
3	A	SEAT BELT CHANGED	VICKY	LALIT	ASR	16.12.2022
2	A	SEAT BELT COMPLIANCE NOTE ADDED	N. CHOPRA	ASR	JPS	14.04.2011
1	S	SEAT DESPATCH RATING DETAIL ADDED	N. CHOPRA	ASR	JPS	07.06.10
	R	APPERANCE DETAILS ADDED				
	Q	KNOB OPERATING TORQUE VALUE ADDED				
	P	SEAT CUSHION & BACK CUSHION THICKNESS ADDED				
	O	HAND LEVER OPERATING FORCE - DETAIL ADDED				
	N	BEADING CRIMPING DETAIL ADDED				
	M	BEADING MOLDING FORCE, BEADING LOCK QTY. & REXINE CLIP QTY. ADDED				
	L	PULL FORCE FOR SLIDER - DETAIL MODIFIED				
	K	SLIDER MECHANISM LATERAL PLAY INCREASED TO 2.0 mm				
	J	REXINE COVER FOR SEAT CUSHION AND BACK CUSHION ADDED IN B.OM.				
	I	SEAT COVER REXINE SPECIFICATION ADDED				
	H	BEADING, BEADING LOCK DETAIL ADDED				
	G	Z-SECTION SLOT DETAIL & STOPPER LOCATION ADDED				
	F	Z-SECTION & MTG. BKT. THICKNESS ADDED				
	E	TAPPING SIZE SHOWN IN C-BKT. NUT				
	D	SIP DIMENSIONS TOLERANCE INCREASED TO ±12.7 & MARKED AS <COMP SC>				
	C	<SC> DIMENSIONS MARKED				
	B	WEIGHT ADJUSTMENT STICKER ADDED				
	A	C-BKT. DETAIL ADDED & C-BKT. ADDED IN B.OM.				
REVISION LET		REVISIONS	DRN	CKR	APPR	DATE

UNSPECIFIED TOLERANCES AS PER ISO-2768-1:1989									
		DIMENSIONS							
LINEAR IN MM.	OVER	0.5	3	6	30	120	400	1000	2000
	UPTO	3	6	30	120	400	1000	2000	4000
f FINE	(X.XXX)	±0.05	±0.05	±0.1	±0.15	±0.2	±0.3	±0.5	-
m MEDIUM	(X.XX)	±0.1	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2
c COURSE	(X.X)	±0.2	±0.3	±0.5	±0.5	±1.2	±2	±3	±4
v VERY COURSE	(X)		±0.5	±1	±1.5	±2.5	±4	±6	±8
		LENGTH OF SHORTER SIDE OF THE ANGLE IN MM							
ANGULAR IN DEG.	OVER	-		10		50		120	400
	UPTO	10		50		120		400	---
f FINE	(X.XXX)	±1°		±0°,30'		±0°,20'		±0°,10'	±0°,5'
m MEDIUM	(X.XX)								
c COURSE	(X.X)	±1°,30'		±1°		±0°,30'		±0°,15'	±0°,10'
v VERY COURSE	(X)	±3°		±2°		±1°		±0°,30'	±0°,20'

REV.NO. AND DATE	04 / 31.07.2023	PART NO.	CUSTOMER	E007605301D1
			POLAR	DSM-10-A

ALL DIMENSION ARE IN MM. REMOVE SHARP CORNERS AND BURRS
TOLERANCE UNLESS STATED AS PER IS 2102 MEDIUM CLASS

POLAR AUTO & ENGG INDUSTRIES PVT.LTD
132 DLF INDUSTRIAL ESTATE, FARIDABAD

SCALE		NAME	DATE	PART NAME -
NTS	DRN	Rahul	07.06.23	8000 MODEL SEAT ASSY. WITH SEAT BELT
	CHD	A.S.R.	07.06.23	
	APPD	R.K.	07.06.23	IF IN DOUBT ASK

MATERIAL
SHEET
QTY. 1
CUSTOMER'S NAME MAHINDRA & MAHINDRA LTD.
MODEL

ER/ECN NO	C/L	LOC	REVISIONS	DRN	CKR	APR	DATE
ER23I0000058	AE		ZINC PLATING CHANGES TO ZINC FLAKE PLATING (MAGNI 565) WITH SILVER GRAY	PRP	NVC	DS	18-01-2024
ER23I0000007	AD	--	SEAT BELT SUPPLY CHANGE	AR	NVC	DS	07-02-23
600000011691	AC	--	PART DESCRIPTION CHANGED AS PER LEGAL METROLOGY ACT REMARK	PRP	NVC	RAW	31-05-17

UNSPECIFIED TOLERANCES AS PER ISO-2768-1:1989 (DIMENSION)									
LINEAR IN mm.	OVER	0.5	3	6	30	120	400	1000	2000
	UPTO	3	6	30	120	400	1000	2000	4000
f FINE (X.XXX)		±0.05	±0.05	±0.1	±0.15	±0.2	±0.3	±0.5	-
m MEDIUM (X.XX)		±0.1	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2
c COARSE (X.X)		±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3	±4
v VERY COARSE (X)			±0.5	±1	±1.5	±2.5	±4	±6	±8
ANGULAR IN deg.		LENGTH OF SHORTER SIDE OF THE ANGLE IN mm.							
	OVER	-		10		50		120	400
	UPTO	10		50		120		400	-
f FINE (X.XXX)		±1°		±0°30'		±0°20'		±0°10'	±0°5'
m MEDIUM (X.XX)									
c COARSE (X.X)		±1°30'		±1°		±0°30'		±0°15'	±0°10'
v VERY COARSE (X)		±3°		±2°		±1°		±0°30'	±0°20'

DO NOT SCALE
ALL DIMENSIONS ARE IN mm

SURFACE FINISH SYMBOLS ISO-1302
WELDING SYMBOLS IS813
REMOVE ALL SHARP CORNERS & BURRS

<SC> COUNT : 0
<CC> COUNT : 0

REF PART NO:

MAHINDRA & MAHINDRA LTD.
FARM DIVISION, INDIA

	NAME	DATE
PROJECT CODE:		
ER NUMBER: 600000003809		
DESCRIPTION : SEAT WITH SEAT BELT (8000 4WD)		
WEIGHT(kg) :	DSNR	AR 07-02-2023
S/F AREA(cm²):	CHKR	NVC 07-02-2023
MATERIAL:	APPR	DS 07-02-2023

PART NUMBER : E007605301D1
CL: AE
DWG.SIZE : A1
SCALE : 1:1
SHEET: 1 OF 1

BREAK SHARP CORNERS MAY BE EITHER CHAMFER OR RADIUS FROM 0.2 mm MIN. TO 1.0 mm MAX.

CHECK DRAWING WITH LATEST CHANGE No

DO NOT CHANGE MANUALLY

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